Disease of uterus

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| **1. Endometrial hyperplasia** | **2. Endometriosis** | **3. leiomyoma** | **4. Endometrial carcinoma** | **5. Cancer cervix** |
| **Def :**  hyperplasia of the endometrium reaction to abnormal estrogenic stimulation | **Def** :  presence of endometrial tissue in abnormal sites. | The commonest benign tumor in females. | The commonest malignant tumor in female genital system |  |
| \* **Age**: around menopause. |  | \* **Age**: during childbearing period | *\** ***Age****:*  usually post-menopausal 55-65 years | *\** ***Age****:* around 40 years |
| ***\*Cause :***  prolonged estrogen stimulation of endometrium due to relative or absolute hyperestrenism e.g.  -Repeated anovulatory cycles.  -Estrogen replacement therapy.  -Estrogen secreting ovarian tumors |  | ***\* Predisposing factors:*** Prolonged estrogenic stimulation. | ***\* Predisposing factors:***  1. Familial predisposition.  2. Nullipara.  3. Hyperesterism.  4. Endometrial polyp | ***Risk factors:***  **a. Sexual activity**:  -Early marriage.  -multiple sexual partners.  **b. Multiparity**.  **c. Oncogenic virus**: HPV.  **d. Precancerous** epithelial lesions:  -Squamous cell papilloma.  -Squamous metaplasia. |
| **\* Types:**  1-Simple (mild – cystic) non atypical hyperplasias:   * Characterized by proliferating endometrial glands of various sizes. * The surrounding stromal cell are dense. * No atypia. * These lesions uncommonly progress to adenocarcinoma.   2. Complex atypical hyperplasias: Exhibit an increase in the number and size of endometrial glands.  The glands are lined by multiple layers of epithelial cells showing atypia.   * Most of the cases are followed by endometrial adenocarcinoma. | ***\* Types:***  1-Endometriosis interna (adenomyosis):  Presence of endometrial tissue inside the myometrium.  2. Endometriosis externa:  presence of endometrial tissue outside the uterine wall. | ***\* Complications:***  1-Abnormal uterine bleeding → iron deficiency anemia.  2-Malignant change (rare 0.5-1%): Leiomyosarcoma.  3-Fertility problems: interfere with implantation, may cause abortion & interfere with child birth. |  |  |

Sched completed with grossly and microscopy features of 3.4.5 above

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| **3. leiomyoma** | **4. Endometrial carcinoma** | **5. Cancer cervix** |
| ***\*Grossly:***  uterine wall mass (es)   * Single or multiple, rounded, firm in consistency, pale brown in color, surrounded by pseudocapsule. * C\S: is whorly. * The mass (es) may be interstitial, subserous or submucous.   The mass (es) may show **secondary changes**;  1-**Degenerations**: hyaline, myxomatous, fatty, cystic, red degeneration.  *N.B: Red degeneration: hemorrhagic infarction occurring in leiomyoma e.g. during pregnancy due to vascular obstruction by thrombosis or uterine contraction.*  2- **Calcification, ossification**.  3- **2ry bacterial infection**: especially with submucous leiomyoma.  4**-Atrophy and fibrosis** after menopause. | ***\*Grossly:***  endometrial carcinoma presents either as a localized polypoid tumor or as a diffuse tumor involving the entire endometrial surface.  Spread generally occurs by direct myometrial invasion with eventual extension to the periuterine structures by direct spread | ***\*Grossly:***   * Common at the squamo-columnar junction. * May be fungating, ulcerative or infiltrative. |
| ***Microscopically:***  Interlacing bundles of smooth muscle cells.  The cells are spindle shaped with rod-shaped nuclei and abundant cytoplasm.  The muscle bundles are surrounded by fibrous stroma, which increases in old masses (fibromyoma**).** | ***\* Microscopically;***  most endometrial carcinomas (about 85%) are adenocarcinomas characterized by more or less well-defined gland patterns closely resembling normal endometrial epithelium. | ***\* Microscopically:***  1. Squamous cell carcinoma (95%) from ectocervix or endocervix had undergone squamous Metaplasia.  2. Adenocarcinoma (5%) from endocervix**.** |

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| **1-Endometriosis interna (adenomyosis):** | **2- Endometriosis externa:** |
| ***\* Def:***  Presence of endometrial tissue inside the myometrium. | ***\* Def:***  presence of endometrial tissue outside the uterine wall. |
|  | ***\* Sites:***  *a*. Genital: ovaries, F. tubes.  b. Extragenital: wall of urinary bladder or intestine, rectovaginal septum, pelvic peritoneum, umbilicus, lung, L.Ns.. |
| ***\* Pathogenesis* :**  Dipping of the basal layer of the endometrium inside the myometrium. | ***\* Pathogenesis:*** unknown; theories;  **1. Regurgitation theory:** reflux the shedded endometrial tissue to the ovaries and tubes during menstruation.  **2. Metaplastic theory:** metaplasia of the serosal cells covering the ovary, rectum…  **3. Vascular and lymphatic theory:** the endometrial tissue disseminate through Blood vessels and lymphatic simulating the tumor spread. |
| ***\* Grossly:***  - Enlarged uterus. - Thick myometrium showing small grayish or hemorrhagic foci. | ***\* Grossly:***  the affected tissue shows small grayish or hemorrhagic foci. |
| ***\* Microscopically:***  The myometrium shows islands of endometrial tissue formed of endometrial glands and stroma | ***\* Microscopically:***  endometrial tissue (glands and stroma) with areas of hemorrhage. |
| ***\* Complications:***   * Menorrhagia. * Dysmenorrhea (painful menstruation). | ***\* Complications:***   * Pain & hemorrhage in the affected area. * The ovaries show **chocolate cysts**. * Peritoneal hemorrhage is complicated by fibrosis and adhesions. |